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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/525,477	03/15/2000	Hisashi Miyazawa	Q58280	9792

7590 03/17/2003
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EXAMINER

NGUYEN, JUDY

ART UNIT PAPER NUMBER

2861

DATE MAILED: 03/17/2003

31

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/525,477

Applicant(s)

MIYAZAWA, HISASHI

Examiner

Judy Nguyen

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 11-28, 38, 39, 46 and 58-103 is/are pending in the application.
- 4a) Of the above claim(s) 5, 15, 66-71, 74, 75, 78-83, 85, 87, 88, 93, 96, 100 and 101 is/are withdrawn from consideration.

- 5) ☒ Claim(s) 16, 58, 59, 72 and 73 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 11-14, 18-28, 46, 60, 61, 63, 65, 76, 77, 84, 86, 90-92, 94, 95, 97-99, 102 and 103 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 17, 38, 39, 62 and 64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 28.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

U.S. Patent and Trademark Office
PTO-326 (Rev. 04-01)

Office Action Summary

Part of Paper No. 31

Art Unit: 2861

DETAILED ACTION

Election/Restrictions

Claims 5, 15, 66-71, **74, 75, 78-83, 85, 87, 88, 93, 96, 100, 101** withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention or species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 13. Please note that the newly added claims **74, 75, 78-83, 85, 87, 88, 93, 96, 100, 101** are identical to previously canceled claims which were directed to nonelected invention or species and were previously withdrawn from further consideration.

Claim Objections

Claims 62 and 64 are objected to because of the following informalities: "said valve" should be --said valve **seat**--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2861

Claims 76, 77, 84, 86, 89-92, 94, 95, 97-99, 102, 103 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete because they depended on base claims that have been canceled. See MPEP § 608.01(n)(V).

Claims 1 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation of "with respect to the movable membrane" in the context of the claim is unclear in meaning. What structural limitation is this suggesting?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 12-14, 18-28, 60, 61, 63, 65 are rejected under 35 U.S.C. 102(b) as being anticipated by Iida (JP 08-174860 having equivalent US patent #6,000,788).

Iida discloses all limitations (see description in equivalent US patent) of the claimed invention including:

- An ink-jet recording head (101)

Art Unit: 2861

- A body (a printer; column 1; first paragraph of equivalent US patent)
- A carriage and a recording head (column 1, second paragraph)
- An ink supply device constructed as a differential pressure valve (see Figures 5-6C) including a coil spring (21), a movable membrane (3) normally contacted elastically with a valve seat (20) by the coil spring
- A container having an ink storage chamber (4) communicates with an ink supply port (2) adapted to be connected to an ink-jet recording head
- A capillary (31) includes a groove
- An air intercepting film (33) sealing the groove
- A fixing part (9) fixed to a periphery of a movable part (center portion) of the movable part
- A supporting part/an annular bent part (outer periphery of element 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iida in view of Erickson (US 5,367,328).

Art Unit: 2861

lida discloses all features of the claimed invention except for a main tank and a conduit between the main tank and the ink supply device.

However, Erickson discloses a main tank (14) and a conduit (16) between the main tank (14) and an ink supply device (12).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of lida to include a main tank and a conduit between the main ink tank and the ink supply device as taught by Erickson for the purpose of supplying ink to the ink supply device.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over lida in view of lms (US 5,136,305).

lida discloses all features of the claimed invention except for the ink supply device being provided with an ink injection port and an ink supplementing device being provided within a range where said carriage is moved and in a non-printing area.

However, lms discloses an ink supply device (18) being provided with an ink injection port and an ink-supplementing device (28) being provided within a range where a

Art Unit: 2861

carriage (20) is moved and in a non-printing area and detachably contacted with the ink injection port.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the ink supply device of lida to include the an ink injection port and an ink-supplementing device being provided within a range where a carriage is moved and in a non-printing area and detachably contacted with the ink injection port as taught by lms for the purpose of supplying ink to the ink supply device.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over lida in view of Baker et al (US 5,025,271).

lida discloses all elements of the claimed invention except for a film member having both gas permeability and ink repellent properties being interposed between the capillary and the ink storage chamber.

However, Baker et al discloses a film member (82) having both gas permeability and ink repellent properties being interposed between a capillary (70) and an ink storage chamber.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the film member as taught by Baker et al in the

Art Unit: 2861

teaching of lida for the purpose of simultaneously providing adequate ventilation and preventing ink back-flow through the capillary.

Allowable Subject Matter

Claims 3, 4, 17, 38, 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 62, 64 would be allowable if rewritten to overcome the objection set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 16, 58, 59, 72, 73 are allowed.

Response to Arguments

Applicant's arguments filed have been fully considered but they are not persuasive.

Applicant argues that lida's coil spring 21 is adjacent to the valve seat 20 so that the valve seat 20 is between the coil spring and the movable membrane 3. Thus, the coil spring is **not** located opposite the valve seat 20 with respect to the movable membrane.

This conclusion is not understood. Regardless whether the spring is adjacent to the

Art Unit: 2861

valve seat or the valve seat is between the coil spring and the movable membrane, the coil spring is considered opposite the valve seat because they are facing each other. Elements being opposite to each other do not prevent them from being adjacent to each other. Other arguments are moot in view of the new grounds of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy Nguyen whose telephone number is (703) 305-7062. The examiner can normally be reached on Monday - Friday.

Art Unit: 2861

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ben Fuller can be reached on (703) 308-0750. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Judy Nguyen
Primary Examiner
March 8, 2003